

## **REMARKS**

Claims 1, 3–5, and 7–20 are pending, of which claims 1, 11, and 14 are independent. Applicants thank the Examiner for entry of the amendments filed November 13, 2009.

Applicants submit herewith a Declaration of Dr. Gilles Guiglionda in support of the present arguments, consideration of which is respectfully requested.

### ***Status of Previous Rejections***

Applicants thank the Examiner for withdrawing the rejection of claims 1 and 5–11 under 35 U.S.C. § 112, second paragraph.

Applicants note that the Examiner maintains the rejection of claims 1, 3–5, and 7–20 under 35 U.S.C. § 103(a).

### ***Claim Rejections – 35 U.S.C. § 103***

The Examiner rejects claims 1, 3–5, and 7–20 under 35 U.S.C. § 103(a) as unpatentable over Evancho *et al.* (U.S. 4,082,578). According to the Examiner, the present claims are *prima facie* obvious because they are “substantially similar” to the aluminum skin compositions disclosed by Evancho *et al.* Applicants respectfully traverse.

The Examiner bears an initial burden to set forth a *prima facie* case of obviousness. M.P.E.P. § 2142. In order to make a *prima facie* case, the Examiner must first elucidate the differences between the claims and the references and then show why it would have been obvious to combine the references (or teachings within the same reference) to reach the claimed subject matter. M.P.E.P. § 2142. It is not enough for the Examiner to simply pick elements from individual references without considering the context in which those elements are used or arranged in the prior art. M.P.E.P. § 2142. Rather, the Examiner must make explicit findings of fact about what is disclosed by the particular references and present a cogent rationale for why it would have been obvious for a person having ordinary skill in the art to combine the teachings to create the claimed subject matter. In other words, obviousness cannot be established simply by stating that one *can* combine the elements of prior art documents; rather, the proper rationale is to present specific reasons for why one *would* combine them to achieve the claimed subject matter. M.P.E.P. § 2143.01. So that impermissible hindsight analysis is avoided, this analysis must be conducted *without consideration of the claims*.

**A. The Examiner has not stated a *prima facie* case of obviousness because, *inter alia*, Cu concentration is not a result effective variable**

As pointed out by the Applicants, the present application explicitly addresses two problems peculiar to formation of car roof panels: (1) the need for relatively low yield strength after solution treatment, quenching, and age hardening, so that the alloy may be easily formed; and (2) relatively high yield strength at high temperature to avoid plastic deformation of the Al-Si-Mg sheet. Guiglionda Dec. at ¶¶7 and 11. Both problems are solved by, *inter alia*, controlling the Cu concentration at between 0.8 and 1.1 wt%. As acknowledged by the Examiner, this range of Cu is clearly outside of the range disclosed by Evancho *et al.* Nonetheless, the Examiner insists that the concentration of Cu is irrelevant to patentability because it is a “result effective variable.” Applicants submit that this rationale fails to state a *prima facie* case of obviousness.

In order to be a “result effective variable,” the Examiner bears the burden of showing that it is “a variable which achieves a recognized result . . .” M.P.E.P. § 2144.05. The Examiner characterizes Cu concentration as a result effective variable because Evancho *et al.* allegedly teach that increases in yield strength can be achieved by increasing the Cu concentration. However, Evancho *et al.* do not teach any correlation between Cu concentration and high temperature yield strength. In addition, as pointed out by Dr. Guiglionda, Cu increases high temperature yield strength at the beginning of a paint baking treatment by, *inter alia*, increasing the precipitation kinetics of the alloy. Guiglionda Dec. at ¶¶17–19 and disclosed graphs. This likewise is not disclosed by Evancho. Therefore, even assuming that Cu concentration is a “result effective variable” for final yield strength, it cannot be a result effective variable for high temperature yield strength.

**B. The Examiner improperly ignored arguments based on the examples in the specification**

The Examiner, relying on *In re De Blauwe*, 736 F.2d 699, 705, 222 U.S.P.Q. 191, 196 (Fed. Cir. 1984), and M.P.E.P. § 716.01(c) argues that the evidence presented by the Applicants cannot be considered because it was not presented in the form of a declaration or an affidavit. Applicants respectfully submit that the Examiner has misconstrued these references.

Neither *In re De Blauwe* nor the M.P.E.P. requires all evidence to be in the form of an affidavit. The section from *De Blauwe* cited by the Examiner states as follows:

It is well settled that unexpected results must be established by factual evidence. Mere argument or conclusory statements in the specification does not suffice. Here, appellants' table of "[t]ypical dimensions" is devoid of any data from which we can determine whether or not the end caps described therein actually split. In essence, appellants ask us to assume that the end caps in this table are nonsplitting, because a preceding passage in the specification concludes that no splitting occurs in such articles. Examples requiring such assumptions can hardly be considered factual evidence.

Even if the specification contained objective evidence showing that appellants' heat shrinkable articles do not split, such evidence would not be a satisfactory showing of unexpected results. When an article is said to achieve unexpected (i.e. superior) results, those results must logically be shown as superior compared to the results achieved with other articles. Moreover, an applicant relying on comparative tests to rebut a *prima facie* case of obviousness must compare his claimed invention to the closest prior art. Here, appellants have not presented any experimental data showing that prior heat shrinkable articles split. Due to the absence of tests comparing appellants' heat shrinkable articles with those of the closest prior art, we conclude that appellants' assertions of unexpected results constitute mere argument and conclusory statements in the specification which cannot establish patentability.

*In re De Blauwe*, 736 F.2d at 705. It is clear from this passage that the *De Blauwe* court did not announce a blanket rule that unexpected results must be presented in the form of an affidavit, but instead held that the lack of a comparative example in the specification necessitated submission of an affidavit. This is born out in M.P.E.P. § 716.01(a), which specifically states that "Examiners must consider comparative data in the specification which is intended to illustrate the claimed invention in reaching a conclusion with regard to the obviousness of the claims" (emphasis added). Thus, it is clear that comparative examples in the specification do not require a supporting affidavit to be considered for the purposes of rebutting a *prima facie* case of obviousness.

Applicants' arguments in the previous responses all related to comparative examples set forth in the specification. In particular, Applicants pointed out that the specification compared alloys of claim 1 with alloy 6111 – which is equivalent to alloys of Evancho (*see* Guiglionda Dec. at ¶15) – and alloy 6016, which has significant overlap with Evancho. *See Response and Request for Reconsideration after Non-Final Rejection dated November 13, 2009* at pages 7–9.

Even the recapitulative table set forth in the response was nothing more than a compilation of data explicitly disclosed in the specifications of the present application and Evancho. *See, e.g.*, Specification at tables 2 and 3; *Evancho* at, *inter alia*, Ex. 10. Accordingly, the Examiner was obligated to consider these arguments in favor of an unexpected result.

**C. The present declaration provides clear evidence of unexpected results and superior qualities of the claimed subject matter compared to Evancho**

Without waiving any of the above arguments, Applicants have submitted herewith a Declaration of Gilles Guiglionda, one of the named inventors of the present application. Dr. Guiglionda highlights a number of errors with the Examiner's analysis and unexpected results achieved with the present alloys as opposed to those of Evancho. For example, Dr. Guiglionda points out that:

- all of the Examples disclosed by the Evancho reference have a forming yield strength that is higher than the claimed limit after three weeks of natural aging (*see* Guiglionda Dec. ¶10);
- Aluminum roofs attached to steel frames are especially susceptible to plastic deformation at high temperatures (such as those during paint baking), due to differential expansion of aluminum compared to steel and the peculiar attachment of the aluminum sheet to the steel frame (*see* Guiglionda Dec. ¶¶11–13);
- The high temperature yield strength of the present alloys are sufficient to resist this plastic deformation, while the alloys of Evancho are not (*see* Guiglionda Dec. ¶¶14–15);
- The addition of Cu at the claimed concentrations assists with resisting plastic deformation by, *inter alia*, accelerating the rate of precipitation at high temperature, which was not disclosed by Evancho (*see* Guiglionda Dec. ¶¶16–20);
- A person of ordinary skill in the art could understand Evancho as teaching that Cu at the presently claimed concentration would be detrimental to formability, making the formability of the present alloys surprising (*see* Guiglionda Dec. ¶21 and the attached recapitulative table); and

- the present alloys are capable of being attached to a steel frame via laser welding, contrary to the teaching of Evancho (*see* Guiglionda Dec. ¶22).

Applicants hereby incorporate by reference the entirety of the Guiglionda Declaration. In light of the arguments set forth by Dr. Guiglionda, Applicants respectfully submit that the present alloys are unexpectedly superior to those of Evancho for use in a roof part for an automobile. As such, the claim 1 is not obvious in light of Evancho. As the remaining claims all depend, either directly or indirectly from claim 1 or require the same alloys of claim 1, they likewise are not obvious.

Applicants thus respectfully request that this basis for rejection be withdrawn.

**Conclusion**

In view of the remarks above, Applicants respectfully submit that this application is in condition for allowance and request favorable action thereon. The Examiner is invited to contact the undersigned if any additional information is required.

Applicants authorize the Commissioner to charge Deposit Account No. 50-4254, referencing Attorney Docket No. 2901683-000026 for fees due or any deficiencies of fees and to credit any overpayments.

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Respectfully submitted,

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